

Subpart B, Appendix M can be accurately applied to the Daikin Altherma product class. As explained above in the DACA's Petition for Waiver, the design characteristics of the Daikin Altherma product class clearly prevent testing the Daikin Altherma system with the prescribed test procedures and obtaining a representative result of the system's true energy consumption characteristics.

The likelihood of DOE approving DACA's Petition for Waiver is supported by the DOE's history of approving previous waiver requests from other manufacturers for products that are similar to the Daikin Altherma product class, based on the same rationale offered by DACA in this Petition for Waiver.

Additionally, DACA is likely to suffer economic hardship and competitive disadvantage if DOE does not grant its interim waiver request. DACA is now preparing to introduce its Daikin Altherma product class in a matter of months. If we must wait for completion of the normal waiver consideration and issuance process, DACA will be forced to delay the opportunity to begin recouping through product sales its production and marketing costs associated with introducing the Daikin Altherma product class into the United States market.

DOE approval of DACA's interim waiver application is also supported by sound public policy reasons. As DOE stated in its January 7, 2008 approval of DACA's interim waiver for the VRV-WII product classes:

[I]n those instances where the likely success of the Petition for Waiver has been demonstrated, based upon DOE having granted a waiver for similar products design, it is in the public interest to have similar products tested and rated for energy consumption on a comparable basis.

73 *Fed. Reg.* at 1215. The Daikin Altherma product class will provide superior comfort to the end user, and will incorporate state of the art technology such as variable speed compressors and a solar kit to enhance the energy efficiency performance of the integrated domestic hot water production system component. The Daikin Altherma product class will introduce technologies that will increase system efficiency and reduce national energy consumption, and that will also offer a new level of comfort and control to end users.

DACA requests that DOE grant our Application for Interim Waiver so we can bring the new highly energy efficient technology represented by the

Daikin Altherma product class to the market as soon as possible, thereby allowing the U.S. consumer to benefit from our high technology and high efficiency product.

#### *Confidential Information*

DACA makes no request to DOE for confidential treatment of any information contained in this Petition for Waiver and Application for Interim Waiver.

#### **Conclusion**

Daikin AC (Americas), Inc. respectfully requests DOE to grant its Petition for Waiver of the applicable test procedure to DACA for specified models of the Altherma system, and to grant its Application for Interim Waiver. DOE's failure to issue an interim waiver from test standards would cause significant economic hardship to DACA by preventing DACA from marketing these products even though DOE has previously granted a waiver to other products that were offered in the market with similar design characteristics.

We would be pleased to respond to any questions you may have regarding this Petition for Waiver and Application for Interim Waiver. Please contact Lee Smith, Director of Product of Product Marketing at 972-245-1510 or by email at [Lee.smith@daikinac.com](mailto:Lee.smith@daikinac.com).

Sincerely,

Akinori Atarashi  
President  
Daikin AC (Americas), Inc.  
1645 Wallace Drive, Suite 110  
Carrollton, Texas 75006  
(Submitted in triplicate)

Encls: Copy of Daikin Altherma  
Brochure, Engineering Data, EN  
Testing & Rating Standards

[FR Doc. E9-29785 Filed 12-14-09; 8:45 am]

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#### **DEPARTMENT OF ENERGY**

[Case No. CAC-025]

#### **Energy Conservation Program for Certain Industrial Equipment: Publication of the Petition for Waiver From Daikin AC (Americas), Inc. and Granting of the Interim Waiver From the Department of Energy Commercial Package Air Conditioner and Heat Pump Test Procedure**

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Notice of petition for waiver, granting of application for interim waiver, and request for comments.

**SUMMARY:** This notice announces receipt of and publishes a petition for waiver from Daikin AC (Americas), Inc. (Daikin). The petition for waiver (hereafter "petition") requests a waiver from the U.S. Department of Energy (DOE) test procedure applicable to commercial package air-cooled central air conditioners and heat pumps. The petition is specific to the Daikin variable capacity VRV-III-C (commercial) multi-split heat pumps. Through this document, DOE: (1) Solicits comments, data, and information with respect to the Daikin Petition; and (2) announces the grant of an interim waiver to Daikin from the applicable DOE test procedure for the subject commercial air-cooled, multi-split air conditioners and heat pumps.

**DATES:** DOE will accept comments, data, and information with respect to the Daikin Petition until, but no later than January 14, 2010.

**ADDRESSES:** You may submit comments, identified by case number "CAC-025," by any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the instructions for submitting comments.

- *E-mail:*

[AS\\_Waiver\\_Requests@ee.doe.gov](mailto:AS_Waiver_Requests@ee.doe.gov). Include either the case number [CAC-025], and/or "Daikin Petition" in the subject line of the message.

- *Mail:* Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J/ 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-2945. Please submit one signed original paper copy.
- *Hand Delivery/Courier:* Ms. Brenda Edwards, U.S. Department of Energy, Building Technologies Program, 950 L'Enfant Plaza SW., Suite 600, Washington, DC 20024. Please submit one signed original paper copy.

*Instructions:* All submissions received must include the agency name and case number for this proceeding. Submit electronic comments in WordPerfect, Microsoft Word, Portable Document Format (PDF), or text (American Standard Code for Information Interchange (ASCII)) file format and avoid the use of special characters or any form of encryption. Wherever possible, include the electronic signature of the author. DOE does not accept telefacsimiles (faxes).

Any person submitting written comments must also send a copy of such comments to the petitioner, pursuant to 10 CFR 431.401(d). The contact information for the petitioner is: Mr. Lee Smith, Director of Product Marketing, Daikin AC (Americas), Inc.,

1645 Wallace Drive, Suite 110,  
Carrollton, Texas 75006.

According to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit two copies: one copy of the document including all the information believed to be confidential, and one copy of the document with the information believed to be confidential deleted. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

**Docket:** For access to the docket to review the background documents relevant to this matter, you may visit the U.S. Department of Energy, 950 L'Enfant Plaza SW., (Resource Room of the Building Technologies Program), Washington, DC, 20024; (202) 586-2945, between 9 a.m. and 4 p.m., Monday through Friday, except Federal holidays. Available documents include the following items: (1) This notice; (2) public comments received; (3) the petition for waiver and application for interim waiver; and (4) prior DOE rulemakings regarding similar central air conditioning and heat pump equipment. Please call Ms. Brenda Edwards at the above telephone number for additional information regarding visiting the Resource Room.

**FOR FURTHER INFORMATION CONTACT:** Dr. Michael G. Raymond, U.S. Department of Energy, Building Technologies Program, Mail Stop EE-2J, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0121. *Telephone:* (202) 586-9611. *E-mail:* [AS\\_Waiver\\_Requests@ee.doe.gov](mailto:AS_Waiver_Requests@ee.doe.gov).

Ms. Francine Pinto or Mr. Michael Kido, U.S. Department of Energy, Office of the General Counsel, Mail Stop GC-72, Forrestal Building, 1000 Independence Avenue, SW., Washington, DC 20585-0103. *Telephone:* (202) 586-7432 or (202) 586-5827, respectively. *E-mail:* [Francine.Pinto@hq.doe.gov](mailto:Francine.Pinto@hq.doe.gov) or [Michael.Kido@hq.doe.gov](mailto:Michael.Kido@hq.doe.gov).

#### SUPPLEMENTARY INFORMATION:

##### I. Background and Authority

Title III of the Energy Policy and Conservation Act (EPCA) sets forth a variety of provisions concerning energy efficiency, including Part A of Title III, which establishes the "Energy Conservation Program for Consumer Products Other Than Automobiles." (42 U.S.C. 6291-6309) Similar to the program in Part A, Part A-1 of Title III provides for an energy efficiency program titled, "Certain Industrial Equipment," which includes

commercial air conditioning equipment, package boilers, water heaters, and other types of commercial equipment. (42 U.S.C. 6311-6317)

Today's notice involves commercial equipment under Part A-1. Part A-1 specifically includes definitions (42 U.S.C. 6311), test procedures (42 U.S.C. 6314), labeling provisions (42 U.S.C. 6315), energy conservation standards (42 U.S.C. 6313), and the authority to require information and reports from manufacturers (42 U.S.C. 6316). With respect to test procedures, Part A-1 authorizes the Secretary of Energy (the Secretary) to prescribe test procedures that are reasonably designed to produce results which measure energy efficiency, energy use, and estimated annual operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6314(a)(2)).

For commercial package air-conditioning and heating equipment, EPCA provides that "the test procedures shall be those generally accepted industry testing procedures or rating procedures developed or recognized by the Air-Conditioning and Refrigeration Institute [ARI] or by the American Society of Heating, Refrigerating and Air-Conditioning Engineers [ASHRAE], as referenced in ASHRAE/IES Standard 90.1 and in effect on June 30, 1992." (42 U.S.C. 6314(a)(4)(A)) Under 42 U.S.C. 6314(a)(4)(B), the statute further directs the Secretary to amend the test procedure for a covered commercial product if the industry test procedure is amended, unless the Secretary determines, by rule and based on clear and convincing evidence, that such a modified test procedure does not meet the statutory criteria set forth in 42 U.S.C. 6314(a)(2) and (3).

On December 8, 2006, DOE published a final rule adopting test procedures for commercial package air-conditioning and heating equipment, effective January 8, 2007. 71 FR 71340. DOE adopted ARI Standard 340/360-2004, "Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment," for small and large commercial package air-cooled heat pumps with capacities  $\geq 65,000$  Btu/h and  $<760,000$  British thermal units per hour (Btu/h). *Id.* at 71371. Pursuant to this rulemaking, DOE's regulations at 10 CFR 431.95(b)(2) incorporate by reference ARI Standard 340/360-2004, and Table 1 to 10 CFR 431.96 directs manufacturers of commercial package air-cooled air conditioning and heating equipment to use the appropriate procedure when measuring energy efficiency of those products. (The cooling capacities of Daikin's commercial VRV-III-C multi-

split heat pump products, which are at issue in the waiver petition filed by Daikin, range from 6 tons (72,000 Btu/hr) to 16 tons (192,000 Btu/hr), thereby resulting in these products falling within the range of ARI Standard 340/360-2004, which covers products with capacities greater than 65,000 Btu/hour.)

DOE's regulations for covered products permit a person to seek a waiver from the test procedure requirements for covered commercial equipment if at least one of the following conditions is met: (1) The petitioner's basic model contains one or more design characteristics which prevent testing according to the prescribed test procedures; or (2) the prescribed test procedures may evaluate the basic model in a manner so unrepresentative of its true energy consumption as to provide materially inaccurate comparative data. 10 CFR 431.401(a)(1). Petitioners must include in their petition any alternate test procedures known to the petitioner to evaluate the basic model in a manner representative of its energy consumption. 10 CFR 431.401(b)(1)(iii). The Assistant Secretary for Energy Efficiency and Renewable Energy (Assistant Secretary) may grant a waiver subject to conditions, including adherence to alternate test procedures. 10 CFR 431.401(f)(4). Waivers remain in effect pursuant to the provisions of 10 CFR 431.401(g).

The waiver process also permits parties submitting a petition for waiver to file an application for interim waiver of the applicable test procedure requirements. 10 CFR 431.401(a)(2). The Assistant Secretary will grant an interim waiver request if it is determined that the applicant will experience economic hardship if the application for interim waiver is denied, if it appears likely that the petition for waiver will be granted, and/or the Assistant Secretary determines that it would be desirable for public policy reasons to grant immediate relief pending a determination on the petition for waiver. 10 CFR 431.401(e)(3). An interim waiver remains in effect for a period of 180 days or until DOE issues its determination on the petition for waiver, whichever occurs first, and it may be extended by DOE for an additional 180 days, if necessary. 10 CFR 431.401(e)(4).

##### II. Petition for Waiver

On September 9, 2009, Daikin filed a petition for waiver from the test procedures at 10 CFR 431.96, which are applicable to commercial package air-cooled central air conditioners and heat pumps, and an application for interim

waiver. The capacities of the Daikin VRV–III–C multi-split heat pumps range from 72,000 Btu/hr to 192,000 Btu/hr, making the applicable test procedure for Daikin’s commercial VRV–III–C multi-split heat pumps ARI Standard 340/360–2004, which manufacturers are directed to use pursuant to Table 1 of 10 CFR 431.96.

Daikin seeks a waiver from the applicable test procedures under 10 CFR 431.96 on the grounds that its VRV–III–C multi-split heat pumps contain design characteristics that prevent testing according to the current DOE test procedures. Specifically, Daikin asserts that the two primary factors that prevent testing of its multi-split variable speed products are the same factors stated in the waivers that DOE granted to Mitsubishi Electric & Electronics USA, Inc. (Mitsubishi) for a similar line of commercial multi-split air-conditioning systems:

- Testing laboratories cannot test products with so many indoor units; and
- There are too many possible combinations of indoor and outdoor unit to test. 69 FR 52660 (August 27, 2004) (Mitsubishi waiver); 72 FR 17528 (April 9, 2007) (Mitsubishi waiver); 72 FR 71387 (Dec. 17, 2007) (Samsung waiver); 72 FR 71383 (Dec. 17, 2007) (Fujitsu waiver); 73 FR 39680 (July 10, 2008) (Daikin waiver); 74 FR 15955 (April 8, 2009) (Daikin waiver); 74 FR 16193 (April 9, 2009) (Sanyo waiver); 74 FR 16373 (April 10, 2009) (Daikin waiver).

The VRV–III–C systems have operational characteristics similar to other commercial multi-split products manufactured by Mitsubishi, Samsung, Fujitsu and Sanyo, all of which have already been granted waivers. The VRV–

III–C system can be connected to the complete range of Daikin ceiling mounted, concealed, ducted, corner, cassette, wall-mounted and floor-mounted and other indoor fan coil units. Each of these units has nine different indoor static pressure ratings as standard, with addition pressure ratings available. In certain high-capacity applications, Daikin’s VRV–III–C systems have the capability to combine two outdoor units to create a larger capacity system. There are over one million combinations possible with the DACA VRV–III–C system. Accordingly, Daikin requested that DOE grant a waiver from the applicable test procedures for its VRV–III–C product designs, until a suitable test method can be prescribed.

III. Application for Interim Waiver

On September 9, 2009, in addition to its petition for waiver, Daikin submitted to DOE an application for interim waiver. DOE determined that Daikin’s application for interim waiver does not provide sufficient market, equipment price, shipments, and other manufacturer impact information to permit DOE to evaluate the economic hardship Daikin might experience absent a favorable determination on its application for interim waiver. However, DOE understands that absent an interim waiver, Daikin’s products would not otherwise be tested and rated for energy consumption on a comparable basis with equivalent products where DOE previously granted waivers. In other words, there would not be a level playing field and thus Daikin would be placed at a competitive disadvantage. Furthermore, DOE has determined that it appears likely that Daikin’s Petition for Waiver will be

granted and that is desirable for public policy reasons to grant Daikin immediate relief pending a determination on the petition for waiver. DOE believes that it is likely Daikin’s petition for waiver for the new VRV–III–C multi-split models will be granted because, as noted above, DOE has previously granted a number of waivers for similar product designs.<sup>1</sup> The two principal reasons supporting the grant of the previous waivers also apply to Daikin’s VRV–III–C products: (1) Test laboratories cannot test products with so many indoor units; and (2) it is impractical to test so many combinations of indoor units with each outdoor unit. In addition, DOE believes that similar products should be tested and rated for energy consumption on a comparable basis. For these same reasons, DOE also determined that it is desirable for public policy reasons to grant immediate relief pending a determination on the petition for waiver.

Therefore, *it is ordered that:*  
The application for interim waiver filed by Daikin is hereby granted for Daikin’s VRV–III–C air-cooled multi-split heat pumps, subject to the specifications and conditions below.

1. Daikin shall not be required to test or rate its VRV–III–C commercial air-cooled multi-split products on the basis of the existing test procedure under 10 CFR 431.96, which incorporates by reference ARI Standard 340/360–2004.

2. Daikin shall be required to test and rate its VRV–III–C commercial air-cooled multi-split products according to the alternate test procedure as set forth in section IV(3), “Alternate test procedure.”

The interim waiver applies to the following basic model groups:

Type	Size	Model No.	Combination	
			8-Ton	16-Ton
Condensing Unit .....	6-Ton .....	RTSQ72PTJU .....	.....	1
	8-Ton .....	RTSQ96PTJU .....	1 .....	.....
	10-Ton .....	RTSQ120PTJU .....	.....	1
	Up to 16-Ton .....	BTSQ192PTJU .....	1 .....	1
2nd Stage Function Unit .....	.....	BHFP30A56 .....	.....	1
Outdoor Piping Kit .....	.....	.....	.....	.....

This interim waiver is conditioned upon the presumed validity of statements, representations, and documents provided by the petitioner. DOE may revoke or modify this interim

waiver at any time upon a determination that the factual basis underlying the petition for waiver is incorrect, or upon a determination that the results from the alternate test

procedure are unrepresentative of the basic models’ true energy consumption characteristics.

<sup>1</sup> DOE notes that it has also previously granted interim waivers to Fujitsu (70 FR 5980 (Feb. 4, 2005)), Samsung (70 FR 9629 (Feb. 28, 2005)), Mitsubishi (72 FR 17533 (April 9, 2007)), and Daikin (72 FR 35986 (July 2, 2007)), for comparable commercial multi-split air conditioners and heat pumps.

#### IV. Alternate Test Procedure

Responding to two recent petitions for waiver from Mitsubishi, DOE specified an alternate test procedure to provide a basis from which Mitsubishi could test and make valid energy efficiency representations for its R410A CITY MULTI products, as well as for its R22 multi-split products. Alternate test procedures related to the Mitsubishi petitions were published in the **Federal Register** on April 9, 2007. See 72 FR 17528 and 72 FR 17533. For reasons similar to those published in these prior notices, DOE believes that an alternate test procedure is appropriate in this instance.

DOE understands that existing testing facilities have a limited ability to test multiple indoor units simultaneously, and the large number of possible combinations of indoor and outdoor units for some variable refrigerant flow zoned systems makes it impractical for manufacturers to test. We further note that subsequent to the waiver that DOE granted for Mitsubishi's R22 multi-split products, ARI formed a committee to discuss the issue and to work on developing an appropriate testing protocol for variable refrigerant flow systems. However, to date, no additional test methodologies have been adopted by the committee or submitted to DOE.

Therefore, as discussed below, as a condition for granting this interim waiver to Daikin, DOE is including an alternate test procedure similar to those granted to Mitsubishi for its R22 and R410A products. DOE plans to consider the same alternate test procedure in the context of the subsequent Decision and Order pertaining to Daikin's petition for waiver. Utilization of this alternate test procedure will allow Daikin to test and make energy efficiency representations for its VRV-III-C products. More broadly, DOE has applied a similar alternate test procedure to other waivers for similar residential and commercial central air conditioners and heat pumps. Such cases include petitions for waiver involving multi-split products manufactured by Mitsubishi (72 FR 17528, April 9, 2007); Samsung (72 FR 71387, Dec. 17, 2007); Fujitsu (72 FR 71383, Dec. 17, 2007); Daikin (73 FR 39680, July 10, 2008); Daikin (74 FR 15955, April 8, 2009); Sanyo (74 FR 16193, April 9, 2009); and Daikin (74 FR 16373, April 10, 2009).

The alternate test procedure developed in conjunction with the Mitsubishi waiver permits Daikin to designate a "tested combination" for each model of outdoor unit. The indoor units designated as part of the tested combination must meet specific

requirements. For example, the tested combination must have from two to eight indoor units so that it can be tested in available test facilities. (The "tested combination" was originally defined to consist of one outdoor unit matched with between 2 and 5 indoor units. The maximum number of indoor units in a tested combination is increased in this instance from 5 to 8 to account for the fact that these larger-capacity products can accommodate a greater number of indoor units.) The tested combination must be tested according to the applicable DOE test procedure, as modified by the provisions of the alternate test procedure as set forth below. The alternate test procedure also allows manufacturers of such products to make valid and consistent representations of energy efficiency for their air-conditioning and heat pump products.

In the present case, DOE is modifying the alternate test procedure taken from the above-referenced waiver granted to Mitsubishi for its R410A and R22 CITY MULTI products to revise the definition of a "tested combination." The "tested combination" was originally defined to consist of one outdoor unit matched with between 2 and 5 indoor units. The maximum number of indoor units in a tested combination is here increased from 5 to 8 to account for the fact that these larger-capacity products (>150,000 Btu/h) can accommodate a greater number of indoor units. DOE plans to consider inclusion of the following waiver language in the Decision and Order for Daikin's VRV-III-C commercial multi-split air-cooled heat pump models:

(1) The "Petition for Waiver" filed by Daikin Electronics, Inc. is hereby granted as set forth in the paragraphs below.

(2) Daikin shall not be required to test or rate its VRV-III-C variable capacity multi-split heat pump products listed above in section III, on the basis of the existing test procedures, but shall be required to test and rate such products according to the alternate test procedure as set forth in paragraph (3).

(3) *Alternate test procedure.*

(A) Daikin shall be required to test the products listed in section III above according to the test procedures for central air conditioners and heat pumps prescribed by DOE at 10 CFR 431.96, except that Daikin shall test a "tested combination" selected in accordance with the provisions of subparagraph (B) of this paragraph. For every other system combination using the same outdoor unit as the tested combination, Daikin shall make representations concerning the VRV-III-C products

covered in this waiver according to the provisions of subparagraph (C) below.

(B) Tested combination. The term "tested combination" means a sample basic model comprised of units that are production units, or are representative of production units, of the basic model being tested. For the purposes of this waiver, the tested combination shall have the following features:

(1) The basic model of a variable refrigerant flow system used as a tested combination shall consist of one outdoor unit, with one or more compressors, that is matched with between 2 and 8 indoor units; for multi-split systems, each of these indoor units shall be designed for individual operation.

(2) The indoor units shall—

(i) Represent the highest sales model family or another indoor model family if the highest sales model family does not provide sufficient capacity (see ii);

(ii) Together, have a nominal cooling capacity that is between 95% and 105% of the nominal cooling capacity of the outdoor unit;

(iii) Not, individually, have a nominal cooling capacity that is greater than 50% of the nominal cooling capacity of the outdoor unit;

(iv) Operate at fan speeds that are consistent with the manufacturer's specifications; and

(v) Be subject to the same minimum external static pressure requirement while being configurable to produce the same static pressure at the exit of each outlet plenum when manifolded as per section 2.4.1 of 10 CFR Part 430, subpart B, appendix M.

(C) *Representations.* In making representations about the energy efficiency of its VRV-III-C variable capacity air-cooled multi-split heat pump products, for compliance, marketing, or other purposes, Daikin must fairly disclose the results of testing under the DOE test procedure, doing so in a manner consistent with the provisions outlined below:

(1) For VRV-III-C combinations tested in accordance with this alternate test procedure, Daikin may make representations based on these test results.

(2) For VRV-III-C combinations that are not tested, Daikin may make representations based on the testing results for the tested combination at the same energy efficiency level as the tested combination with the same outdoor unit and which is consistent with either of the two following methods:

(i) Representation of non-tested combinations according to an

Alternative Rating Method (ARM) approved by DOE; or

(ii) Representation of non-tested combinations at the same energy efficiency level as the tested combination with the same outdoor unit.

## V. Summary and Request for Comments

Through today's notice, DOE announces receipt of the Daikin petition for waiver from the test procedures applicable to Daikin's VRV-III-C commercial multi-split heat pump products, and for the reasons articulated above, DOE grants Daikin an interim waiver from those procedures. As part of this notice, DOE is publishing Daikin's petition for waiver in its entirety. The petition contains no confidential information. Furthermore, today's notice includes an alternate test procedure that Daikin is required to follow as a condition of its interim waiver and that DOE is considering including in its subsequent Decision and Order. In this alternate test procedure, DOE is defining a "tested combination" which Daikin could use in lieu of testing all retail combinations of its VRV-III-C multi-split heat pump products.

DOE is interested in receiving comments on the issues addressed in this notice. Pursuant to 10 CFR 431.401(d), any person submitting written comments must also send a copy of such comments to the petitioner, whose contact information is included in the section entitled **ADDRESSES** section above.

Issued in Washington, DC, on December 8, 2009.

**Cathy Zoi,**

*Assistant Secretary, Energy Efficiency and Renewable Energy.*

September 9, 2009.

Ms. Catherine Zoi

Assistant Secretary for Energy Efficiency and Renewable Energy  
U.S. Department of Energy

1000 Independence Ave, SW.,  
Washington, DC 20585-0121

## Re: Petition for Waiver of Test Procedure

Dear Assistant Secretary Zoi:

Daikin AC (Americas) Inc. (DACA) respectfully petitions the Department of Energy (DOE) pursuant to 10 CFR § 431.401(a)(1) (2009) for a waiver of the test procedures applicable to central air conditioners and heat pumps, as established in 10 C.F.R. § 431.96 (2009) and ARI Standard 340/360-20041, for the Daikin VRV-III-C system (also called Cold Climate VRV), an air source heat pump system that incorporates a unique second stage refrigeration cycle to deliver improved heating performance and efficiency at lower ambient conditions. The specific models for which DACA requests this waiver in the Daikin VRV-III-C product class are listed below in this Petition. DACA seeks a waiver from the existing central air conditioner and central air conditioning heat pump test procedure for the Daikin VRV-III-C line of heat pumps because the basic models contain design criteria that prevent testing of the basic models according to the prescribed test procedures. We are simultaneously requesting an interim waiver for the same systems pursuant to 10 CFR § 431.401(a)(2) (2009).

## General Characteristics of DACA's VRV-III-C Products

The Daikin VRV-III-C system has the following characteristics and applications:

- The VRV-III-C operates as a heat pump system only (as an 8-ton or a 16-ton system).
- The VRV-III-C is an inverter controlled heat pump system that can provide year round heating in very low outdoor temperatures. In low ambient conditions, the VRV-III-C offers 30% more heating capacity than a standard Daikin VRV-III heat pump.

- The VRV-III-C can provide cooling in ambient temperatures down to 23 °F.

- The VRV-III-C includes a proprietary 2-stage refrigeration cycle technology to ensure improved heating effect.

- The VRV-III-C delivers nominal (rated) heating capacity at 5 °F (– 15 °C) (rated condition is 47 °F).

- The VRV-III-C delivers 87% of nominal (rated) heating capacity at – 4 °F (– 20 °C), and the system delivers 75% of nominal (rated) heating capacity at – 13 °F (– 25 °C).

- The VRV-III-C provides an enhanced heating "warm up" function.

- The VRV-III-C minimizes heating downtime from defrost operation.

- The VRV-III-C system eliminates the need to use supplemental "resistance type" strip heating elements.

- The VRV-III-C system heat pump compressor's inverter technology includes an integrated frequency-converter that adjusts the rotational speed of the compressor to meet the heating or cooling demand. Therefore, the system seldom operates at full capacity.

- The VRV-III-C system can be linked to the complete range of Daikin Ceiling-Mounted, Concealed, Ducted, Corner, Cassette, Wall-Mounted, Floor-Mounted and other indoor fan coil units, providing the same connection flexibility as Daikin's standard VRV systems. The amount of piping, and the number, diversity and range of indoor units that can be connected to the VRV-III-C is comparable to the Daikin VRV-II, VRV-II-S and VRV-III systems for which DOE has previously issued waivers.

## Particular Basic Models for Which DACA Requests a Waiver

DACA requests a waiver from the test procedures for the following basic model groups:

Type	Size	Model Number	Combination	
			8-Ton	16-Ton
Condensing Unit .....	6-Ton .....	RTSQ72PTJU .....		1
	8-Ton .....	RTSQ96PTJU .....	1	
	10-Ton .....	RTSQ120PTJU .....		1
2nd Stage Function Unit .....	Up to 16-Ton .....	BTSQ192PTJU .....	1	
Outdoor Piping Kit .....		BHFP30A56 .....		1

<sup>1</sup> Detailed citations to the test procedures for which DACA is requesting a waiver are included on page 3 of this petition.

### **VRV-III-C System Characteristics Constituting the Grounds for DACA's Petition**

The Daikin VRV-III-C system consists of a heat pump that comprises a newly designed outdoor unit and "function unit" featuring two-stage compression technology. This design feature gives the VRV-III-C its outstanding performance characteristics by creating the higher pressures necessary for efficient system operation under low ambient conditions.

The Daikin VRV-III-C system can be connected to the complete range of Daikin Ceiling Mounted, Concealed, Ducted, Corner, Cassette, Wall-Mounted and Floor-Mounted and other indoor fan coil units. Each of these units has nine different indoor static pressure ratings as standard, with addition pressure ratings available. There are over one million combinations possible with the DACA VRV-III-C product offerings. It is completely impractical for testing laboratories to test a product such as the VRV-III-C with multiple indoor units because of the huge number of potential system configurations.

The test method for central air conditioners and heat pumps contained in 10 C.F.R. § 431.96, Subpart B, Appendix M does not account for the extremely large number of potential system configurations possible with the VRV-III-C system. Therefore, the currently applicable test method cannot accurately account for the Daikin VRV-III-C system's energy performance across the range of possible system configurations.

DACA's VRV-III products share many of the design characteristics and features of similar equipment for which DOE has already approved either interim waivers or waivers, including DACA's VRV, VRV-S and VRV-III product lines, and Mitsubishi Electric and Electronics USA, Inc.'s (MEUS) CITY MULTI and S&L product classes.<sup>2</sup> The same testing constraints and limitations apply to all of these products.

The rationale for DACA's Petition for a waiver from testing standards for the Daikin VRV-III-C system is virtually identical to basis for the other manufacturers' previous requests for waivers noted above. DACA requests

that DOE apply the same rationale to DACA's Petition for waiver for the Daikin VRV-III-C system that DOE used to grant the previous waiver petitions for their similar systems.

### **Specific Testing Requirements Sought to be Waived**

The test procedures from which DACA is requesting a waiver are contained in 10 C.F.R. § 431.96(b), Table 1, which incorporates ARI Standard 340/360-2004 by reference into 10 C.F.R. Part 431, and which is applicable to central air conditioner and heat pump equipment with a capacity of >65,000 Btu/hr.

### **Discussion of Need for Requested Waiver**

Although the capacity of the Daikin VRV-III-C product class is within the scope of 10 C.F.R. Part § 431.96, the design characteristics of the Daikin VRV-III-C product class prevent testing of the system according to the prescribed test procedures in a manner that represents the system's true energy consumption characteristics. Specifically, application of the existing prescribed test method cannot account for the large number of possible combinations of indoor and outdoor units that would be subject to testing. Also, it is impossible for testing laboratories to test products with such a large number of possible combinations.

The absence of a waiver from the required testing procedure will restrict the availability to consumers in the United States of the Daikin VRV-III-C system's energy savings benefits that result from integrating domestic hot water production into the system.

### **Manufacturers of Other Basic Models Incorporating Similar Design Characteristics**

DACA is aware of the following manufacturer that produces a basic model incorporating similar design characteristics to the VRV-III-C in the United States market:

- Mitsubishi Electric & Electronics USA, Inc.<sup>3</sup>

### **Alternative Test Procedure**

DACA proposes that DOE apply the same alternate test procedure to the covered VRV-III-C products as DOE applied to DACA's VRV-III products in the waiver that DOE granted for those products on April 8, 2009 (74 *Fed. Reg.* 15,955). The alternate test method

appears in Section 3 of the VRV-III waiver. 74 *Fed. Reg.* at 15,958.

### **Application for Interim Waiver**

DACA also hereby applies pursuant to 10 C.F.R. § 431.401(a)(2) for an interim waiver of the applicable test procedure requirements for the Daikin VRV-III-C product class models listed above. The basis for DACA's Application for Interim Waiver follows.

DACA is likely to succeed in its Petition for Waiver because there is no reasonable argument that the test method contained in 10 C.F.R. § 431.96 can be accurately applied to the Daikin VRV-III-C product class. As explained above in the DACA's Petition for Waiver, the design characteristics of the Daikin VRV-III-C product class clearly prevent testing the Daikin VRV-III-C system with the prescribed test procedures because of the large number of possible system combinations and the limitations of existing testing facilities.

The likelihood of DOE approving DACA's Petition for Waiver is supported by the DOE's history of approving previous waiver requests from other manufacturers for products that are similar to the Daikin VRV-III-C product class, based on the same rationale offered by DACA in this Petition for Waiver.

Additionally, DACA is likely to suffer economic hardship and competitive disadvantage if DOE does not grant its interim waiver request. DACA is now preparing to introduce its Daikin VRV-III-C product class in a matter of months. If we must wait for completion of the normal waiver consideration and issuance process, DACA will be forced to delay the opportunity to begin recouping through product sales its production and marketing costs associated with introducing the Daikin VRV-III-C product class into the United States market.

DOE approval of DACA's interim waiver application is also supported by sound public policy reasons. As DOE stated in its January 7, 2008 approval of DACA's interim waiver for the VRV-WII product classes:

[I]n those instances where the likely success of the Petition for Waiver has been demonstrated, based upon DOE having granted a waiver for similar products design, it is in the public interest to have similar products tested and rated for energy consumption on a comparable basis.

73 *Fed. Reg.* at 1215. The Daikin VRV-III-C product class will provide superior comfort to the end user, and will incorporate state of the art technology such as an advanced inverter drive and two-stage compression that

<sup>2</sup> DOE granted DACA an interim waiver for its VRV and VRV-S product lines in a letter dated August 14, 2006, and DOE renewed this interim waiver on July 2, 2007 (72 *Fed. Reg.* 35,986). DOE granted MEUS a waiver for its CITY MULTI VRFZ class of products. 69 *Fed. Reg.* 52,660 (August 27, 2004). DOE granted DACA a waiver for its VRV-III product lines on April 8, 2009 (74 *Fed. Reg.* 15,955). DOE has recently granted MEUS an interim waiver for its S&L Class multi-split heat pumps and heat recovery systems.

<sup>3</sup> MEUS's Hyper Heating VRF system has similar design characteristics to the VRV-III-C system, offering year-round heating in low ambient temperatures.

enable the system to provide year round heating in very low ambient temperatures. The Daikin VRV-III-C product class will introduce technologies that will increase system efficiency and reduce national energy consumption, and that will also offer a new level of comfort and control to end users.

DACA requests that DOE grant our Application for Interim Waiver so we can bring the new highly energy efficient technology represented by the Daikin VRV-III-C product class to the market as soon as possible, thereby allowing the U.S. consumer to benefit from our high technology and high efficiency product.

#### Confidential Information

DACA makes no request to DOE for confidential treatment of any information contained in this Petition for Waiver and Application for Interim Waiver.

#### • Conclusion

Daikin AC (Americas), Inc. Corporation respectfully requests DOE to grant its Petition for Waiver of the applicable test procedure to DACA for specified models of the VRV-III-C system, and to grant its Application for Interim Waiver. DOE's failure to issue an interim waiver from test standards would cause significant economic hardship to DACA by preventing DACA from marketing these products even though DOE has previously granted waivers to other products that were offered in the market with similar design characteristics.

We would be pleased to respond to any questions you may have regarding this Petition for Waiver and Application for Interim Waiver. Please contact Lee Smith, Director of Product Marketing at 972-245-1510 or by email at [Lee.smith@daikinac.com](mailto:Lee.smith@daikinac.com).

Sincerely,

Akinori Atarashi,  
President

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(Submitted in triplicate)  
Encls.

cc:  
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Attn: William Rau, Senior Vice President and  
General Manager

[FR Doc. E9-29795 Filed 12-14-09; 8:45 am]

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## DEPARTMENT OF ENERGY

[Case No. CAC-021]

### Energy Conservation Program for Commercial Equipment: Decision and Order Granting a Waiver to LG Electronics, Inc. (LG) From the Department of Energy Commercial Package Air Conditioner and Heat Pump Test Procedures

**AGENCY:** Office of Energy Efficiency and Renewable Energy, Department of Energy.

**ACTION:** Decision and Order.

**SUMMARY:** This notice publishes the U.S. Department of Energy's (DOE) Decision and Order in Case No. CAC-021, which grants a waiver to LG from the existing DOE test procedure applicable to commercial package central air conditioners and heat pumps. The waiver is specific to the LG variable speed and variable refrigerant volume Multi V (commercial) multi-split heat pumps and heat recovery systems. As a condition of this waiver, LG must test and rate its Multi V multi-split products according to the alternate test procedure set forth in this notice.

**DATES:** This Decision and Order is effective December 15, 2009.

**FOR FURTHER INFORMATION CONTACT:** Dr. Michael G. Raymond, U.S. Department of Energy, Building Technologies Program, Mailstop EE-2J, 1000 Independence Avenue, SW., Washington, DC 20585-0121. Telephone: (202) 586-9611. E-mail: [Michael.Raymond@ee.doe.gov](mailto:Michael.Raymond@ee.doe.gov).

Francine Pinto or Michael Kido, U.S. Department of Energy, Office of the General Counsel, Mail Stop GC-72, 1000 Independence Avenue, SW., Washington, DC 20585-0103. Telephone: (202) 586-9507. E-mail: [Francine.Pinto@hq.doe.gov](mailto:Francine.Pinto@hq.doe.gov) or [Michael.Kido@hq.doe.gov](mailto:Michael.Kido@hq.doe.gov).

**SUPPLEMENTARY INFORMATION:** In accordance with 10 CFR 431.401(f)(4), DOE gives notice of the issuance of its Decision and Order as set forth below. In this Decision and Order, DOE grants LG a Waiver from the existing DOE commercial package air conditioner and heat pump test procedures for its Multi V multi-split products, subject to a condition requiring LG to test and rate the specified models from its Multi V multi-split product line pursuant to the alternate test procedure provided in this notice. The current test procedure is the Air-Conditioning and Refrigeration Institute (ARI) Standard 340/360-2004, "Performance Rating of Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment" (incorporated

by reference at 10 CFR 431.95(b)(2)). Further, today's decision requires that LG may not make any representations concerning the energy efficiency of these products unless such product has been tested consistent with the provisions and restrictions in the alternate test procedure set forth in the Decision and Order below, and such representations fairly disclose the results of such testing. (42 U.S.C. 6314(d)) Distributors, retailers, and private labelers are held to the same standard when making representations regarding the energy efficiency of these products. (42 U.S.C. 6293(c)).

Issued in Washington, DC, on December 8, 2009.

**Cathy Zoi,**

*Assistant Secretary, Energy Efficiency and Renewable Energy.*

#### Decision and Order

*In the Matter of:* LG Electronics, Inc. (LG) (Case No. CAC-021).

#### Background

Title III of the Energy Policy and Conservation Act (EPCA) sets forth a variety of provisions concerning energy efficiency, including Part A of Title III which establishes the "Energy Conservation Program for Consumer Products Other Than Automobiles." (42 U.S.C. 6291-6309) Similar to the program in Part A, Part A-1 of Title III provides for an energy efficiency program titled, "Certain Industrial Equipment," which includes large and small commercial air conditioning equipment, package boilers, storage water heaters, and other types of commercial equipment. (42 U.S.C. 6311-6317).

Today's notice involves commercial equipment under Part A-1. The statute specifically includes definitions, test procedures, labeling provisions, energy conservation standards, and provides the Secretary of Energy (the Secretary) with the authority to require information and reports from manufacturers. 42 U.S.C. 6311-6317. With respect to test procedures, the statute generally authorizes the Secretary to prescribe test procedures that are reasonably designed to produce test results which reflect energy efficiency, energy use, and estimated annual operating costs, and that are not unduly burdensome to conduct. (42 U.S.C. 6314(a)(2)).

For commercial package air-conditioning and heating equipment, EPCA provides that "the test procedures shall be those generally accepted industry testing procedures or rating procedures developed or recognized by